

EXPERIENCE STUDY – STATE TEACHERS’ RETIREMENT SYSTEM

Methodology

General methodology for all assumptions

- ❑ Study comprises the years January 1, 1995 through January 1, 2000
- ❑ Data used in this study was provided by the State Teachers’ Retirement Board and Boston Retirement Board and reflects the January 1, 1995, 1996, 1998, 1999 and 2000 data used in the Commonwealth actuarial valuations
- ❑ Reconciliation of members completed for each year
- ❑ Adjustment made to account for the two-year period January 1, 1996 to January 1, 1998
- ❑ For each period in the 5 year experience study period (1/95 to 1/96, 1/96 to 1/98, 1/98 to 1/99, and 1/99 to 1/00), we determined the member experience relating to:
 - Retirement
 - Disability
 - Withdrawal (Turnover)
 - Post-retirement mortality
 - Salary increases
- ❑ Actual experience determined at each age (and/or completed years of service) for each assumption. For example, for retirement, we determined the actual number of members retiring at each age.
- ❑ Expected experience determined for each assumption. For example, for retirement, we determined the expected number of members retiring at each age based on the plan assumptions.
- ❑ An actual/expected (A/E) ratio was computed at each age for each assumption.
- ❑ Graphed experience results and used various smoothing techniques to select assumptions

EXPERIENCE STUDY – STATE TEACHERS’ RETIREMENT SYSTEM

Methodology (continued)

In addition to the general methodology that was used for each assumption outlined on the previous page, the following specific analysis was conducted:

- **Retirement**
 - ❑ Assumed a member retired if the member was eligible to retire at the beginning of a period and is not in the active data file at the end of the period
 - ❑ Analyzed results by gender
 - ❑ Analyzed results separately for members retiring before or after age 55
 - ❑ Analyzed results separately for members retiring with greater than or less than 20 years of service
- **Disability**
 - ❑ Results modified to reflect that some members retire from an inactive status as opposed to an active status
 - ❑ Compared results to historical disability counts from PERAC disability unit
 - ❑ Analyzed results by the percentage of disabilities that are job related (accidental) compared to non-job-related (ordinary)
- **Withdrawal**
 - ❑ Assumed a member withdrew if the member was not eligible to retire at the beginning of the period and is not in the active data file at the end of the period
 - ❑ Analyzed results by service and age/service combined in addition to age
 - ❑ Analyzed results by gender
- **Post-Retirement Mortality**
 - ❑ Analyzed results by gender
 - ❑ Adjusted results to reflect retiree deaths with continuing payments to beneficiaries
 - ❑ Compared actual experience for each Group to several standard mortality tables (83GAM, 94GAM, UP94 and RP-2000)
 - ❑ Performed testing for disabled retired members separately by gender
- **Salary Increases**
 - ❑ Determined ratios of salaries at the end of the year to salaries at the beginning of the year for continuing members
 - ❑ Analyzed results by service and age/service combined in addition to age